

AUSTRAL HEPATICAE V. STUDIES ON SCHISTOCHILACEAE*

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We are, in part jointly, in part separately, in the process of monographing the Schistochilaceae of the so-called subantarctic regions: the alpine areas and regions with subantarctic beech forests of Australasia and South America. In conjunction with such monographic studies several new entities have been found. In order to have the convenience of being able to cross-refer to these in several papers currently being prepared, and to avoid using nomina nuda, the following diagnoses of new taxa are offered. Details of these taxa and illustrations appropriate to them, will appear in the several projected publications.

Schistochila altissima subsp. polystratosa Schust. & Engel, subsp.

nov.

Subsp. altissimae similis, sed differt 1) foliis crassioribus, usque ad 5-6-stratosis in areis prope carinam; 2) amphigastriis angustioribus, lingulatis vel elongato-ovatis.

Holotypus: Chile, Prov. Magallanes, Isla Desolación, Puerto Angosto, ca. 700 m, 1 April 1896, Dusén 226 sub S. splachnophylla (M!).

Plants presumably green alive, olive green to light brown in herbarium; erect to ascending; shoots 3.0-4.0 mm wide. Branches sporadic to common, basiscopic, of Radula type. Stems thick and fleshy for plant size. Rhizoids in rather small fascicles at under-leaf bases; colorless (with age brownish); the tips occasionally ± branched, but no septations seen.

Leaves opaque, polystratose, the lamina 5-6 stratose near keel, becoming 3-4 stratose and then 2 stratose, margins unistratose for 2-4 cell rows; in cross section outermost cells averaging slightly smaller in diameter than median 2-3 cells rows; leaves transverse to weakly succubously inserted; fleshy, rigid, vertical, stiffly later-

* The junior author would like to thank Dr. Rolf Singer for assistance with the Latin diagnoses.

ally patent, suborbicular to suboblate, concave and rather saucer-like; not complicate, in cross section with the 2 halves forming a faintly lunate continuum; keel short, single, fleshy, often low except distally, where often abruptly subauriculate, mostly extending from at or near base to 0.55-0.65(0.70) distance to sinus, never attaining sinus; leaves subequally 0.10-0.25 bifid; dorsal and ventral surfaces smooth, elamellate. Ventral and dorsal lobes broadly triangular, apices bluntly acute to subapiculate, occasionally blunt, mostly ending in a single, nonelongated cell, lobe margins entire; dorsal lobe usually slightly larger than the ventral; lamina margins entire. Leaf cells with walls equally somewhat thick-walled, trigones absent; median leaf cells 13-25 μ wide, (18)22-36(40) μ long; cuticle smooth. Underleaves ca. 0.50X stem width, elongate-ovate to lingulate; typically stiffly spreading from stem to squarrose or reflexed, appearing substipitate from a fleshy, 3-5 stratose base, the lamina distally becoming unistratose; apex retuse or bifid to 0.15-0.20; lobe apices blunt or subacute; sinus a mere notch usually; lamina margins entire.

Androecia and gynoecia not seen.

This taxon is allied only to S. altissima Hodgs. subsp. altissima, of New Zealand (for which see Schuster, 1971, fig. 3). In the latter plant, as presumably in subsp. polystratosa, bracteolar antheridia are absent. Subsp. altissima is distinct in (a) the somewhat collenchymatous leaf cells, sometimes with slightly bulging trigones (see fig. 3:17-18, 20 in Schuster, loc. cit.); (b) the more nearly oblong to obovate underleaves, never widest basally, and typically somewhat more deeply bifid; and (c) the much thinner, less fleshy leaves which are only 2-3-stratose, even approaching the keel. When the patterns of variation of this complex are better understood, and more material comes to hand, it may prove necessary to separate the New Zealand and South American taxa specifically; on the basis of the known material, to do so now would be wholly premature.

One of the very distinctive features of the present plant are the often fleshily stipitate and squarrose underleaves. In typical S. altissima we have seen no such fleshy bases. In the latter, rhizoids often occur at leaf bases as well; we have seen them only at underleaf bases in subsp. polystratosa. In the type of S. altissima a few of the rhizoids are lobate-septate at the apices; we have not found such in subsp. polystratosa.

Schistochila caudata Schust. & Engel, sp. nov.

Plantae parvae (usque ad 4.3 mm lata), pallide virentes, rhizoidis rufis; foliis angustis, complanatis, multum longioribus latitudine, unistratosis, levibus, elamellatis, asymmetricice bifidis; lobus ventralis liber et triangularis ad apicem, apice caudatus, cilio 4-5 cellulari usque ad 305-425 μ longo (cellulis 5-9:1) praeditus; marginibus foliorum longiciliatis, ciliis gracilibus, basiangustatis;

amphigastriis reducta et caule multum angustioribus (eis prope gynoecia exceptis).

Holotypus: Falkland Islands, Mt. Adam, 700 m, 13 December 1907, Halle & Skottsberg s. n. (hb. Schuster).

Plants subhyaline, pale green; apparently loosely prostrate and/or caespitose when crowded; shoots 2-4(4.3) mm wide; complanate. Branches not seen. Rhizoids scattered along ventral surface of stem with a slight concentration at underleaf bases; magenta; tips occasionally feebly branched.

Leaves with lobes unistratose throughout; laterally wide spreading; keel in part bearing 2 unistratose wings, ventral wing conspicuous, 0.60-0.70 the length of ventral lobe, wing margins sparingly spinose dentate; dorsal wing inconspicuous, extending for varying distances from distalmost point of keel, at most 1/2 length of ventral wing. Ventral lobe ellipsoidal to sublingulate-obovate, dorsal and ventral surfaces smooth, elamellate; apex long apiculate, terminating in a cilium of 3-5 superposed elongated, rather thick-walled cells; margins bearing ca. 8-15 sharp, spinose teeth or cilia or laciniae, but the basal half of ventral margin sparingly armed or entire. Dorsal lobe 0.75-0.85 length of ventral lobe, free for 0.15-0.25 its length; dorsal surface smooth, elamellate; apex nearly like the ventral lobe apex; terminating in a conspicuous caudate, ciliiform, stiff or somewhat tortuous process which is longer than armature of dorsal or ventral lobe, process often (260)305-425 μ , made up of 4-6 superposed elongated cells (ca. 5-8:1, the terminal cell often 100-125 x 14-18 μ [6-9:1]); dorsal margin rather copiously armed with long cilia made up of mostly 2-3 rather thick-walled cells (mostly 4-6:1, terminal cells 6-9:1), basal portion of margin entire. Ventral lobe cells thin-walled, trigones medium to large; median lobe cells 23-36 μ wide, 35-58 μ long; cuticle smooth. Underleaves, except distally on gynoecial shoots, very small to almost vestigial, 0.40-0.50X stem width, rather polymorphous, subrectangular to ovate-triangular to sometimes + ligulate; bifid to 0.50-0.65; lamina margins entire; underleaves near gynoecial areas larger.

Androecia and mature gynoecia not seen.

Schistochila caudata has been given its name because of the abrupt and long, slender cilia terminating the dorsal and, to a less extent usually, ventral leaf lobes. Plants are much more ciliate than those of any other American Schistochilae in which leaf surfaces are unarmed. This, linked with the pale green color and vinaceous rhizoids, the translucent, hyaline, elongated leaves, and the often vestigial underleaves easily separate the species from all other New World taxa.

This species is closely related only to the New Zealand S. pseudo-kirkiana Schust. (S. kirkiana of Schuster, 1971, fig. 16), which is briefly described below. The two taxa differ as follows:

1. Flattened leaf not distinctly ovate (dorsal lobe at base not or hardly ampliate), much longer than broad, copiously ciliate; cilia formed of strikingly elongated cells (terminal cells often $100-125 \times 14-18 \mu$ [6-9:1]), those of dorsal lobe apex longest, of usually 4-6 superposed cells. Falkland Islands
 S. caudata Schust. & Engel
1. Flattened leaf ovate to broadly ovate, slightly longer than wide to wider than long, spinose-ciliate to spinose-dentate; teeth more tapered, 2(3) cells wide in basal part, uniseriate only for distal 2-3(4) cells, the cells of the uniseriate sector $50-70 \mu$ long (2-4:1). New Zealand. S. pseudokirkiana Schust.

Schistochila pseudokirkiana Schust., sp. nov.

Species S. caudatae similis, sed foliis latioribus, plerumque ovatis vel late ovatis, lobo dorsali ad basem dilatato; debilius dentatis, dentibus apicem versus angustatis, eius basi e 2-3 cellulas efformata, apicibus uniseriatis, e cellulis pro medio 2-4X longioribus latitudine efformatis.

Holotypus: New Zealand, South Island, Earland Falls, Humboldt Mts., Fiordland Natl. Park, Schuster 67-377a (hb. Schuster).

Similar to S. caudata Schust. & Engel, but differing in the following features: (a) Leaves broader, typically distinctly ovate when flattened, with the dorsal lobe quite ampliate near base; and (b) leaves with dentition much less ciliiform, with the teeth typically 2-3 cells wide at base and tapered into the uniseriate sector, which is formed of 2-3(4) cells that average only 2-4X as long as wide.

This species, illustrated in Schuster (1971, fig. 16), will be dealt with in detail in another account. It is highly plastic in New Zealand but all extremes agree with each other, and differ from S. caudata, in the broader leaves, with less distinct ciliation. This is especially true near the gynoecia, which in S. caudata have the lobes quite caudate-ciliate with uniseriate cilia abruptly arising from a base 2-3(4) cells broad. New Zealand plants tend to vary in the direction of having no cilia (or only 1-3 small teeth) of the ventral lobes in some populations (e.g., RMS 48538, RMS 67-221c), and in the direction of having wider than long leaves that are distinctly broad-ovate in outline (RMS 52601). The pattern of variation suggests S. pseudokirkiana and S. caudata are adequately differentiated at the species level. Both differ from true S. kirkiana (which has large underleaves, wider than the stem) in the highly reduced underleaves, always much narrower than the stem, which are often reduced to mere lanceolate lamellae.

Schistochila reflexistipula Engel & Schust., sp. nov.

Plantae parvae, usque ad 2.8 mm latae, pallide virentes vel olivaceae, rhizoideis hyalinis vel pallide fuscis, ramosis apice septatis; foliis subverticalibus, 4-5-stratosis prope carinam, elamellatis, margine integris; amphigastriis maximis, imbricatis, eius latitudine usque ad 2.0X caulis diametri, orbicularibus vel suboblatis, margine plerumque reflexis.

Holotypus: Argentina, Terr. Tierra del Fuego, Rfo Harubre Valley, 2-3 km S of Paso Garibaldi, Rte 3, ca. 600-650 m, 25 February 1961, Schuster 59422 (hb. Schuster).

Plants light green or light olive green; suberect, shoots 2.0-2.8 mm wide; subisophyllous. Branches rather common, usually of lateral-intercalary type, Frullania- and Microlepidozia-type branching very rare. Rhizoids at underleaf and frequently also ventral lobe bases, occasionally at base of dorsal lobe; colorless or very pale brown, often branched at the tips, branches frequently septate.

Leaves with dorsal and ventral lobes 4-5 stratose near carina; + transversely oriented, ventral lobe insertion + transverse, dorsal lobe insertion incubous to transverse; leaves often + vertical, obliquely spreading, bearing 1 unarmed wing 0.75-0.80 the length of ventral lobe. Ventral lobe very wide ovate to suborbicular, dorsal and ventral surfaces smooth, elamellate; apex narrowly rounded or broadly triangular or broadly rounded and with or without a broad-based terminal tooth, apex otherwise entire; ventral margin deflexed and lending lobe rather deeply convex, entire; dorsal margin entire. Dorsal lobe 1.3-1.5 the length of ventral lobe, free for 0.40-0.50 its length; moderately to strongly erect, sometimes recurved; dorsal surface smooth, elamellate; apex acutely or obtusely triangular, usually apiculate; dorsal margin entire-3 dentate in median portion, occasionally 1-2 dentate at the base. Ventral lobe cells with walls thin, trigones small; median lobe cells 19-32 μ wide, 23-36 μ long; cuticle smooth. Underleaves 1.25-2.0X stem width, moderately to strongly spreading, margins usually reflexed lending underleaf concave to subnaviculariform; orbicular to suboblato; apex retuse or bifid to 0.15; lamina margins entire.

Androecia and gynoecia not seen.

This species is related to S. leucophylla of southern South America, but may be distinguished from it by (a) the orbicular to suboblato underleaves which are ca. 1.25-2.0X the stem width, retuse or bifid to 0.15 and with margins usually reflexed lending the underleaf concave to subnaviculariform; and (b) the transverse insertion and orientation of the ventral lobes.

Schistochila subhyalina Schust., sp. nov.

Species formis minoribus S. colensoanae similis, plantae ca. 5-9 mm latae, sed foliis ubique unistratosis; lobi ventrales elliptico-oblongi, usque ad 3-4 mm longi, marginibus integris vel repando-sinuatis.

Holotypus: New Zealand, South Island, S of Earland Falls, Humboldt Mts., on track from Lake Howden to Lake Mackenzie, Fiordland Natl. Park, Schuster 67-377 (hb. Schuster); mixed with Triandrophylllum falcifolium and Schistochila kirkii.

Plants pure green, chlorophyllose but rather pellucid, closely prostrate and firmly attached to substrate, 5-9 mm wide x 12-30 (35) mm long, often essentially unbranched; branches basicopic, of Radula type. Rhizoids colorless to pale brownish with age. Leaves contiguous to weakly imbricate, laterally stiffly, widely patent (the moist plant appearing rather dorsiventrally compressed), sharply complicate-bilobed, when flattened ovate, clearly longer than broad (2450-2750[2850] μ broad x 3000-3200[3400] μ long), margins entire but often varyingly sinuous to repand-sinuate, exceptionally with an isolated, low, blunt tooth. Ventral half (including wing) narrowly elliptical-oblong, ca. 1780-1950 μ broad x 3000-3200 μ long to 2100 μ broad; wing 450-635(650) μ wide, single, arched, entire-margined; apex of ventral lobe variable, blunt to acute to, often, obliquely bluntly subtruncate to rounded. Dorsal lobe only moderately ampliate towards base, 1125-1430 μ broad x 2250-2450(2750) μ long. Leaves everywhere unistratose, juncture of lobes and keel excepted. Cells smooth, without thickened lenticular papillae; cells thin-walled, with medium-large, often moderately bulging trigones; apical cells 35-42 μ up to 40-48 μ ; median cells (34)36-48(50) x 42-55 μ ; median cells with oil-bodies relatively numerous, (10)12-22(25) per cell, finely granular-botryoidal, ellipsoidal and 4 x 5-8(10) μ to 5 x 8 μ , a few spherical and 4.5-5.5 μ . Underleaves remote to contiguous, never appreciably wider than stem, almost all with dense rhizoid fascicles at base, oblong to subquadrate, to 875 μ wide and long, 0.5-0.65 bifid, lobes lanceolate, often acuminate, distally, at least, of strongly elongated cells. Known only sterile.

This relatively vigorous species exhibits close affinities to two other taxa of Pachyschistochilae: (1) S. virescens, to which S. subhyalina shows an approach in the essentially entire leaves, their unistratose form, and in cell size and form. S. subhyalina is at once distinct from S. virescens in the closely adnate, rather than erect and caespitose, mode of growth; in the narrower leaves, both lobes of which are pointed to obtuse, rather than rounded, and in the smaller, much more elongate underleaves. (2) S. colensoana (*sensu* Schuster); S. subhyalina differs from this in the unistratose leaves, the somewhat larger size, and the somewhat larger leaf cells.

Diagnostic features for S. subhyalina are (a) the rather flat

shoot form; and (b) the considerable malleability in form of the leaf lobes: the dorsal lobe may be quite blunt, so much so that the actual apex may be hard to discern; in other cases it may be sharply pointed. Almost the same variability characterizes the ventral lobe.

Schistochila subimmersa Engel & Schust., sp. nov.

Plantae pallide virentes, semi-immersae in substrato, 3-5 mm latae; rhizoideis hyalinis vel brunneolis, apice septatis; carnosae, rigidae, fragiles; lobus ventralis 2-4-stratosus prope carinam, levis, elamellatus, margine integer vel 1-dentatus apicem versus; lobus dorsalis 4-6-stratosus prope carinam, levis, elamellatus; amphigastriis subabsconditis inter rhizoidea, 0.15-0.45 bilobis, lobis integris, lamina integris.

Holotypus: Chile, Prov. Magallanes, E side of Puerto Bueno, Schuster 69-4223 (hb. Schuster).

Plants light green; adnate, \pm immersed in substratum; shoots 3-5 mm wide; leaves anticlinaly assurgent. Branches rare, basiscopic, of *Radula* type. Stems 14-21 cells in diameter. Rhizoids rather dense, in fascicles from stem at underleaf and ventral lobe bases, often also from base of underleaf and ventral lobe; light brown; tips sometimes branched, the branches pluriseptate.

Leaves polystratose, the ventral lobe of fewer strata than the dorsal, ventral lobes 2-4-stratose in basal portion, ca. distal 1/3-3/4 of lobe unistratose, sometimes unistratose nearly to base and with a few local bistratose areas; dorsal lobe 4-6-stratose in basal portion, distal 1/10-1/4 (or distal 4-8 cells) of lobe unistratose; leaves obliquely spreading, \pm naviculariform, bearing 1 unarmed, polystratose wing 0.75-0.90 the length of ventral lobe. Ventral lobe asymmetrically ovate-subelliptic, moderately concave, dorsal and ventral surfaces smooth, elamellate; apex narrowly rounded or obtusely triangular, often apiculate, entire except for tooth very often present at extreme apex; ventral margin entire or 1-dentate toward apex. Dorsal lobe 0.75-0.95 the length of ventral lobe, as long as or slightly shorter than carina; strongly elevated, plane or slightly concave; dorsal surface smooth, elamellate; apex truncate, occasionally rounded and with no discernable truncation, dorsal lobe then appearing half-circular in outline; apical tooth well defined; dorsal margin entire to sinuate to few dentate. Ventral lobe cells with walls thin, trigones medium to large and bulging; median lobe cells 42-56(65) μ wide, (46)50-74(78) μ long; cuticle smooth. Underleaves rather inconspicuous among rather dense rhizoids, ca. 0.30-0.75X stem width, strongly spreading, usually broad-ovate, bifid to 0.15-0.45; lamina margins plane, entire or 1 dentate.

Dioecious; σ^7 not seen. Coelocaulis maximally developed, bearing 4 pairs of bracts, uppermost bracts with size and shape as in

leaves; perianth rudiments absent.

Capsule walls 78-104 μ thick, of (2)3-5 layers; outer layer of cells 38-52 μ thick, radial walls with obscure to thin, continuous sheets of red-brown wall material, the angles where 3-4 cells meet without nodules; inner layer of cells 22-28 μ thick, with semiannular bands and several weak nodular thickenings. Spores 20-23 μ , exine with narrow, rather long, irregular vermiform ridges which often anastomose and lend exine a + reticulate appearance, spores averaging 2.1X elater diameter. Elaters tortuous, nonrigid, (8)10-12 μ wide, bispiral.

The closest affinities of *S. subimmersa* appear to be with Australasian taxa, with specifically, the New Zealand plant referred to as "*S. splachnophylla*" by Hodgson (1941), which is referred to as "*S. cf. paucistipula* Rodway" by Schuster (1971).

Schistochila virescens Schust., sp. nov.

Plantae pure virides, magnitudine mediocres, 5-7 mm latae, rhizoideis hyalinis; erectae et caespitosae; foliis unistratosis, parte basali excepta, margine integris; lobus ventralis perfecte fere ovatus vel ellipticus, apice late rotundatus; lobus dorsalis late dimidiato-ovatus, apice obtusus vel late rotundatus.

Holotypus: New Zealand, South Island, N of Earland Falls, on track from Lake Howden to Lake MacKenzie, Humboldt Mts., ca. 3500 ft, Fiordland Natl. Park, Schuster 67-372 (hb. Schuster).

Plants pure green, erect or ascending, usually caespitose and in tufts or patches, 5-7 mm wide x 15-30 mm tall, sporadically to rarely branched (branches seemingly all Radula type, issuing, in antical aspect of plant, behind the keel of the leaf lying distad to branch). Rhizoids colorless. Leaves remote to contiguous, stiffly, widely, laterally spreading, loosely conduplicate, rather rigid, subsymmetrically bifid for ca. 0.1-0.15 their length, subhyaline and unistratose except for a small basal field, where 2-stratose, nonpapillose and nonlamellate, insertion subvertical, anticlinal and positively somewhat decurrent; ventral "half," including the wide single wing, almost perfectly ovate to elliptical (ca. 1250 μ long), the contours smooth, without trace of dentition, the apex regularly broadly rounded; wing and ventral half forming a continuous whole, the dorsal "half" seemingly inserted on ventral half and keel not extended to apex of leaf; dorsal half broadly dimidiate-ovate, ca. 1525 μ wide x 2000 μ long, somewhat elevated (leaf in cross section V-shaped), the basal half strongly ampliate, wider than ventral half (minus wing), entire-margined or rarely with a stalked slime papilla of tooth near base, the apex blunt to broadly rounded. Underleaves rather large, broader than stem, distant, each with a pale rhizoid-fascicle at base with maturity, broadly orbicular-ovate to broadly rounded-quadrate, to 1225-1250 μ wide x 1015-1050 μ long, sides arched, 0-1 bluntly dentate on each side, apex 0.25-0.35 bilobed by a broad and V-shaped to U-shaped

sinus with rounded base; lobes acute to subacute or blunt; margins of lobes often locally with tangentially elongated cells. Cells smooth everywhere, median ca. 35-45 x 36-55 μ , thin-walled and with concave-sided trigones; chloroplasts very small; oil-bodies (3-4)5-12(13) per cell, colorless, weakly botryoidal, ellipsoidal and 5-5.5 x 7-8 μ to 6-7 x 7.5-9 μ , a few spherical and 5-6.5 μ , present in all cells.

Coelocaulc rigid, thick, with 2-3 pairs of leaflike bracts inserted on it, the upper reduced and variously malformed. Capsule cylindrical, wall 3-4-stratose; valves to 3400 x 550-600 μ . Epidermal cells almost hyaline, only corners with thickenings, forming (jointly) subrotund corner posts; epidermal cells ca. 20-28(32) x 52-78 μ . Innermost cells less regular, 15-25(32) x 70-105 μ , with numerous, often oblique, complete semiannular bands, well defined on tangential walls. Elaters 14 μ (bispiral) to 16-17 μ (trispiral); spirals ca. 4-4.8 μ broad. Spores under 22 μ , with dome-shaped brown papillae to 3-4.5 μ in diameter. ♂ Plant unknown.

Diagnostic for this species is the combination of (a) pure green color; (b) erect growth; (c) moderate size; (d) the uniformly entire-margined leaves, nonlamellate, subequally, shallowly bifid, with uniformly rounded ventral lobes (which, with the wide, arched keel, make an almost perfect ellipse) and blunt to rounded dorsal lobe apices; (e) unistratose leaves; (f) small, bilobed underleaves; (g) 2-3-spiral elaters and (h) spores covered with low to hemispherical, tumid papillae to 3-4.5 μ in diameter.

The senior author has seen a single old capsule; the valves, when not undergoing secondary splitting, were linear, ca. 3400 x 550-600 μ , 3-4-stratose; epidermal cells had conspicuous brown, local nodular thickenings of the angles where 3-4 walls intercept, but the walls were hyaline elsewhere and lacked distinct pigmentation or thickenings; epidermal cells varied in size, were oblong, mostly 20-28(32) x 52-78 μ . Inner cells were even less regular, mostly 15-25(32) x 70-105 μ , with numerous, often oblique, semiannular bands. A few post-mature spores, already beginning germination, were seen; they ranged to 22 μ in diameter (but were probably smaller prior to germination-swelling), and bore scattered, domelike, brown, coarse papillae (but no conspicuous, minute granulae between). Bispiral elaters were 14 μ , trispiral ones 16-17 μ in diameter; spirals were 4-4.8 μ wide.

New Synonyms of South American Schistochila Species

1. Schistochila aberrans Steph. Sp. Hep. 4: 93. 1909 = S. carnosa (Mitt.) Steph.
2. Schistochila diptera Herz. Revue Bryol. Lichén. 21: 257. 1952 = S. quadrifida Evans.

3. Schistochila lamellistipula Steph. Bih. K. Svenska VetenskAkad. Handl. 26 (III, 6): 59. 1900 = S. lamellata (Hook.) Dum.
4. Schistochila lanceolata Steph. K. Svenska VetenskAkad. Handl. 46 (9): 79. 1911 = S. splachnophylla (Hook. f. & Tayl.) Steph.
5. Schistochila parvula (Ångstr.) Steph. [bas.: Gottschea parvula Ångstr. Öfvers. K. VetenskAkad. Förh. 29 (4): 9. 1872] = S. reflexa (Mont.) Steph.
6. Schistochila planifolia Steph. Bih. K. Svenska VetenskAkad. Handl. 26 (III, 17): 29. 1901 = S. quadrifida Evans.
7. Schistochila reicheana Steph. Bih. K. Svenska VetenskAdad. Handl. 26 (III, 6) 59. 1900 = S. lamellata (Hook.) Dum.
8. Schistochila savatieri Steph. Sp. Hep. 4: 94. 1909 = S. lamellata (Hook.) Dum.
9. Schistochila skottsbergii Steph. K. Svenska VetenskAdad. Handl. 46 (9): 80. 1911 = S. stratosa (Mont.) Evans.
10. Schistochila spinosissima Gola, Nuovo G. Bot. Ital. 29: 170. 1923 = S. laminigera (Hook. f. & Tayl.) Evans.
11. Schistochila subintegerrima Steph. K. Svenska VetenskAkad. Handl. 46 (9): 81. 1911 = S. leucophylla (Lehm.) Steph.

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